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DEVELOPMENTS IN TRANSPORTATION FUEL DEMAND &THEIRIMPLICATIONS FOR OAPEC MEMBERS

ORGANIZATION OF ARAB PETROLEUM EXPORTING COUNTRIES (OAPEC)

The Organization of Arab Petroleum Exporting Countries (OAPEC) was founded on the basis of the agreement signed in Beirut, Lebanon on 9 January 1968 between the governments of Kingdom of Saudi Arabia, the State of Kuwait and the (then) Kingdom of Libya. The agreement stipulates that the Organization shall be domiciled in the City of Kuwait.

The principal objective of the Organization is the cooperation of the members in various forms of economic activity in the petroleum industry, the determination of ways and means of safeguarding the legitimate interests of its member countries in this industry, individually and collectively, the unification of efforts to ensure the flow of petroleum to its markets on equitable and reasonable terms, and providing appropriate environment for investment in the petroleum industry in member countries.

In 1970 the United Arab Emirates, the State of Qatar, the Kingdom of Bahrain and the Republic of Algeria joined the Organization, followed by the Syrian Arab Republic and the Republic of Iraq in 1972, Arab Republic of Egypt in 1973, then the Republic of Tunisia in 1982 (its membership was suspended in 1986). Any Arab country which derives a significant share of its national income from petroleum is eligible for membership in OAPEC upon the approval of three-quarters of the member countries, including all three founding members.

- **OAPEC-Sponsored Ventures:** OAPEC has sponsored the creation of four companies: The Arab Maritime Petroleum Transport Company (AMPTC), established in 1972 with headquarters in Kuwait City, the Arab Shipbuilding and Repair Yard Company (ASRY) established in 1973 with headquarters in Bahrain, the Arab Petroleum Investments Corporation (APICORP) established in 1974 with headquarters in Khobar, Saudi Arabia, the Arab Petroleum Services Company (APSC) established in 1975 with headquarters in Tripoli, Libya.

OAPEC'S ORGANS

The Organization carries out its activities through its four organs:

- **Ministerial Council:** The Ministerial Council is the supreme authority of the Organization, responsible for drawing up its general policy.
- **Executive Bureau:** The Executive Bureau is composed of one representative from each of the member countries, drawing recommendations and suggestions to the Council, reviewing the Organization's draft annual budget and submitting it to the Council, it also adopts the regulations applicable to the staff of the General Secretariat. The resolutions of the Executive Bureau are issued by the majority of two- thirds of all members.
- **General Secretariat:** The General Secretariat of OAPEC plans, administers, and executes the Organization's activities in accordance with the objectives stated in the agreement and directives of the Ministerial Council. The General Secretariat is headed by the Secretary General. The Secretary General is appointed by resolution of the Ministerial Council for a tenor of three years renewable for similar period(s). The Secretary General is the official spokesman and legal representative of the Organization and is accountable to the Council.
  The Secretary General directs the Secretariat and supervises all aspects of its activities, and is responsible for the tasks and duties as directed by the Ministerial Council. The Secretary General and all personnel of the Secretariat carry out their duties in full independence and in the common interests of the Organization member countries. The Secretary General and the Assistant Secretaries General possess in the territories of the Organization members all diplomatic immunities and privileges.
- **Judicial Tribunal:** The protocol of the Judicial Tribunal was signed in Kuwait on 9 May 1978 and came into effect on 20 April 1980. The Tribunal is competent to consider all disputes related to the interpretation and application of OAPEC's establishment agreement, as well as disputes arising between two or more member countries concerning petroleum operations.

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DEVELOPMENTS IN TRANSPORTATION FUEL DEMAND & THEIR IMPLICATIONS FOR OAPEC MEMBERS

The transportation sector enjoys a special importance around the world due to its vital role in facilitating movement, as well as, its direct relation to activating all economic sectors on the one hand, and supporting sustainable development efforts on the other hand.

Transportation is witnessing accelerating changes as a result of the increasing world population causing massive urban expansion, and growing migration from the countryside and rural areas to cities. This situation created a dire need for increasing the number of transport means, in addition to the construction of more roads. Transportation (road, maritime, and air) accounts for the largest share of the oil and petroleum products consumption. It is the main sector leading the world's oil demand.

During 2016, transportation accounted for about 57.2% of the world's total oil demand. Most studies expect the transportation sector to claim more than three quarters of the predicted global oil demand growth from 2016 to 2030, especially by developing countries and countries in transition.

The transportation sector relies mainly on fuel resulting from gasoline and diesel due to their unique characteristics and availability from abundant resources. From a logistic angle, both products are available at gas stations that are widely spread in most countries around the world. These products are also easy to store, transfer, distribute, and are affordable for most vehicle owners from different social classes.

Amidst the massive growth in the number of vehicles and buses used in cities, concerns over the environmental consequences resulting from transportation have been raised. This led many countries, including OAPEC members, to put plans for developing their traditional transportation system so that while continuing to rely on petroleum products, they will adopt new and modern liquified fuel technology that extracts pollutant gases. This is in addition to a gradual development of alternative transport systems that rely on other unconventional sources of energy.

OPEC on its part expects demand to increase by about 34.6% by 2040 compared to 2015. Fossil fuel should maintain dominance over the energy mix but its share might drop from 81% in 2015 to 75% in 2040. Oil is expected to keep its leading position as the most important source of energy although its share might drop from 31% in 2015 to 27% in 2040.

In light of these developments with regards to fuel demand in the transportation sector, OAPEC member countries would like to underscore their keenness and commitment to observing international environmental standards in the oil industry, especially the transportation sector. This stems from their keenness on rendering international efforts on environment protection successful. OAPEC member countries have started producing lead-free gasoline a while ago. They also plan to reduce Sulphur in diesel from 1% to 0.05% in line with the local regulations and conditions of each country separately and the preparedness of their refineries for the transition. Some OAPEC countries have plans also to produce high-quality clean fuel.

While observing the developments in the transportation sector to assess their future implications for the oil and gas demand in the member countries, OAPEC Secretariat General reiterates its member countries' welcome and support for all international endeavours to develop the transportation sector in its capacity as a leading partner in the global energy industry. Moreover, the Secretariat General hopes that OAPEC members would succeed in their efforts in the refining sector, most importantly clean fuel projects that would contribute to opening new markets for the Arab petroleum products.

UAE

HE AL MAZROUI:

PETROLEUM MARKETS NEED APPROPRIATE PRICES FOR ALL PARTIES

UAE Minister of Energy and Industry HE Eng. Suhail Mohamed Faraj Al Mazroui stressed that there is a possibility that OPEC and non-OPEC countries will extend global supply cuts in 2018 in order to achieve stability in the world oil market and maintain appropriate prices for all.

Speaking at the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC) held recently in Abu Dhabi, HE Al Mazroui added that the markets are in need for appropriate prices for all parties (producers, investors, and consumers). He hoped that OPEC would reach an agreement on extending the deal in 2018. He indicated that the growth rate is leading demand for oil and gas products while driving the oil market back to the right track.

HE Al Mazroui drew the attention to the fact that extending the OPEC deal is highly complicated in the light of the markets' needs for stability and investment. He added "for this reason we say there is a possibility for production cut extension."

The Minister reiterated the UAE's keenness on developing constructive and long-lasting relations with the world's different countries. This stems from the wise leadership's vision and aspirations on fully considered scientific plans and bases aiming at sustainable development and prosperous life for both nationals and residents. He added "we are keen on developing fruitful relations with all partners, like our positive investment partnerships with China, India, Pakistan, Japan, and many other countries."

KUWAIT APPOINTS HE BAKHEET AL RASHIDI AS NEW OIL MINISTER

An Emiri Decree was issued in Kuwait forming the new government, and appointing HE Bakheet Al Rashidi as the new oil, electricity and water minister in succession to HE Essam Al Marzouq.

OAPEC Secretary General HE Abbas Al Naqi sent a cable of congratulations on the occasion, also on behalf of OAPEC staff, to HE Al Rashidi wishing him success and looking forward to Kuwait's constant support to the organization.

HE Bakheet Al Rashidi's Resumé

- Holder of Bachelor Degree in Chemical Engineering, 1982
- CEO, Kuwait Petroleum International (KPI)
- CEO, KPC Holdings Aruba
- Chairman, Gulf Refining Union, Bahrain, since 2016 till present
- Member of the Board of Directors, Oula Fuel
- Member of the Board of Directors, Kuwait Oil Company (KOC) (between 2011 and 2012)

He took part in many global conferences and forums as a keynote speaker representing the refining sector in Kuwait on its long-term strategic plan.

ALGERIA

NOTICEABLE IMPROVEMENT IN ALGERIA'S FUEL EXPORTS

Algerian Energy Minister HE Mostafa Qaitooni said that Algeria's fuel exports (oil and gas) revenues have risen to $24 billion by the end of September 2017, driven by the 23% increase of the average oil barrel price compared to the same period in 2016.

According to Algeria's news agency, the Minister added that the OPEC meeting held in Algiers in September 2016 has contributed in a relative rebalance of the oil market starting from 2017. It also helped increasing revenues generated from fuel exports to $24 billion.

Algeria produces about 1.2 million b/d of crude oil. It has cut its production share by 50 thousand b/d in response to OPEC's deal.

According to HE Qaitooni, Algeria has exported about 54 billion scm of gas in 2016. It seeks to reach over 57 billion scm of exports by the end of December 2017. Sonatrach expects revenues exceeding $31 billion generated from oil and gas exports.

SIGNING NEW EXPLORATION AGREEMENT IN GULF OF SUEZ

HE Eng. Tarek El Molla, Egypt's Minister of Petroleum and Mineral Resources, signed a new petroleum and gas exploration agreement in East Esh El Malaha area" Offshore Magawish" between EGPC and Trident Petroleum with total investments of about $2.4 million and $500 thousand signature bonus to drill 4 new wells.

Following the signing, the Minister stressed that the 83 agreements signed by the petroleum sector with giant global, Arab, and Egyptian petroleum companies since November 2013 with over $15 billion of investments, along with the recent giant gas discoveries, represent a cornerstone for the program on providing petroleum products to the domestic market. They are also major indicators of the attractive investment climate in Egypt underscoring the diversity of investments and the attractiveness of opportunities introduced by the petroleum sector.

CONFERENCE OF THE PARTIES (COP-23)

In its capacity as an IGO, OAPEC Secretariat General took part in the UN Conference of the Parties (COP-23), CMP-13, and SBSTA-47 in Bonn, Germany, from 6 to 17 November 2017. The Secretariat General was represented by the Secretary General HE Abbas Al Naqi and the Director of the Information and Library Department Mr Abdul Kareem Ayed.

The Conference outcomes were as follows:

- Agreeing drawing a draft paper providing detailed guidelines for making the Paris Agreement fully operational to be completed by December 2018 during the next COP-24.
- Launching 'Talanoa' dialogue 2018, which aims at promoting the enhancement of measures on cutting GHG emissions causing global warming.
- On pre-2020 climate measures, the Conference recognised the dire need for executing climate measures to cut emissions before the year 2020. It was agreed to take regular practical measures during 2018-2019.
- The Parties agreed to hold 'Suva' dialogue for experts during 2018 on loss and damage caused by climate change in the developing countries.

- On climate funding, the German Government announced contributing with €50 million for the Adaptation Fund. Sweden and Belgium contributed to the Least Developed Countries Fund. The Adaptation Fund has been officially recognised as a tool for funding to realise the Paris Agreement goals.
- Points of weakness in the agriculture dossier on the issues of climate change and food security methods should be tackled by virtue of a COP-23 resolution. This is the most important achievement by the COP-23 in favour of the developing countries.
- The number of countries that ratified the Paris Agreement has become 170

countries after the Syrian Government ratification of the Agreement

- 25 cities have announced commitment to become emission-neutral by the year 2050
- 27 countries have formed a new global coalition to eliminate coal
- Poland will host the 2018 UN Climate Change Conference, or "COP-24" from 3 to 14 December 2018.
- At the UNFCCC's high-level meeting, OAPEC Secretary General gave a speech stressing the importance of having support mechanisms and execution tools for the developing countries, especially in connection to technology transfer, CCS technology implementation, improving the transportation sector's efficiency, and the importance of meeting the developed countries obligations for the pre-2020 period. This is in addition to the importance of including texts on mitigating negative impacts of response measures within the range of resolution texts prepared for the Talanoa dialogue 2018.

The Arab League Meetings

OAPEC participates in the Arab League's daily meetings in order to clarify the stances of the Arab countries whose

economies and revenues depend on a single or almost a single source, especially fossil fuel. OAPEC also defends these countries' interests and explains the consequences of climate change policies and the Paris Agreement on the Arab oil and gas sector.

The Secretariat General will coordinate with the KSA's delegation to organise a workshop during the COP-24 in Poland on the "Impact of Response Measures on the Petroleum Industry".

7TH ASIAN MINISTERIAL ENERGY ROUNDTABLE

GLOBAL ENERGY MARKETS IN TRANSITION: FROM VISION TO ACTION

Upon a kind invitation by Thailand's Energy Minister, OAPEC Secretariat General took part in the 7th Asian Ministerial Energy Roundtable (AMER7) held under the theme "Global Energy Markets in Transition: From Vision to Action". The event was hosted by the Energy Ministry in Bangkok, Thailand, in collaboration with the UAE under the umbrella of the International Energy Forum (IEF) from 1-3 November 2017.

The event was attended by Ministers, Vice Ministers, heads of International Organisations, and Thought Leaders of the industry; in addition to 11 officials from energy- related international organisations. Speakers and participants in the 3 key sessions included Ministers from OAPEC member countries including the UAE, Bahrain, KSA, Qatar, and Kuwait.

The AMER7 focused on 3 pivots:

1. Oil markets: investment and security challenges in a changing world.
2. Natural gas: market status and political challenges facing the golden age of gas.
3. Technology and energy future: implications, challenges and preparations.

At the end of the meeting, the ministers welcomed the IEF-backed dialogue on global energy security through open, active, vital, and transparent energy markets. They also welcomed boosting cooperation, trade, and investment across the Asian continent in order to:

- Ensure energy accessibility to a larger population with high and healthy standards.
- Boosting energy efficiency and reducing waste throughout the energy value chain.
- Achieving sustainable economic growth and all sustainable development goals.
- Taking the necessary and appropriate measures on climate change in line with the Paris Agreement outcome.

The Secretariat General was represented by Mr. Abdul Fattah Dandy. Director of Economy Affairs Department.

10TH MEDAYS INTERNATIONAL FORUM

Upon an invitation by Amadeus Institute, OAPEC Secretariat General HE Abbas Al Naqi took part in the 10th MEDays International Forum held in Tangier, Morocco, from 8 to 11 November 2017. The event was held under the high patronage of His Majesty King Mohammed VI of Morocco. It was under the slogan "From Uncertainty to Challenges: The Age of Colossal Disturbances." A number of head of states and governments, ministers, thinktanks, businessmen, and representatives of international organisations and civil societies took part in the forum.

HE Al Naqi participated as a keynote speaker in the session on the "Global Energy Outlook: How to Enable an Effective Transition for a more Accessible, Sustainable, Secure and Affordable Energy System." HE Al Naqi elaborated on a group of current affairs in the oil, gas, and energy industry, most importantly:

- The increasing role of renewables in the primary energy mix in general, with a special focus on OAPEC member countries and other Arab countries
- Recent developments in the energy markets and accessing sustainable energy

The forum's main pivots tackled a number of issues in connection to energy, environment, climate change, sustainable development, and the economic and geopolitical developments in the MENA region.

GLOBAL LNG SOLUTIONS SUMMIT 2017

OAPEC Secretariat General participated in the "Global LNG Solutions Summit" held in Nice, France, on 24 and 25 October 2017. The event was attended by about 300 professionals and CEOs from Arab and global oil and gas companies (including ARAMCO, RASGAS, Gazprom, and Petronas), as well as, a number of EU and international organisations and institutions like the European Commission.

The Secretariat General presented a paper titled "LNG Dynamic Changes in the Arab Countries and LNG's Current and Future Role in Meeting Regional and Global Demand". The paper tackled the development of the LNG industry in the Arab countries, the most significant dynamic changes, and the challenges facing the Arab exporting countries; most significantly: the increasing domestic demand, and the severe competition following the operation of new projects in Australia and the USA. The paper also reviewed the opportunities that the Arab countries have like the availability of large quantities of unexploited gas reserves, infrastructure for exporting, and a unique geographical location in the middle of the world markets.

Moreover, the Secretariat General took part in the first discussion panel titled "The Most Recent Developments in the Global LNG Market." It also co-chaired Day2 sessions.

The Secretariat General was represented by the Gas Industries Expert Engineer Wael Abdul Mo'ati.

INTRODUCTORY MEETING ON JOINT ARAB ECONOMIC REPORT 2018

OAPEC Secretariat General took part in the Introductory Meeting on the Joint Arab Economic Report 2018 held at the headquarters of the Arab League Secretariat General in Cairo from 11 to 13 December 2017. Representatives from the Arab League's Secretariat General, the Arab Monetary Fund, and the Arab Fund for Economic and Social Development took part in the event. Mr. Abdul Fattah Dandy, Director of the Economic Affairs Department, and Mr. Majed Amer, Economic Researcher at the same department, represented OAPEC Secretariat General at the meeting.

During the meeting, the contents of the report chapters have been discussed. Their structure has been approved according to the format presented by the institutions working on the report. Chapter 5 on oil and energy developments, prepared by the Secretariat General, has also been discussed. It covers the general status of exploration, reserves, production (both on Arab and international levels), energy demand, world oil stocks (commercial and strategic), oil and natural gas exports, and the value of the Arab oil exports. OAPEC also prepares the section on hydrocarbon industries in chapter 4 on the industrial sector.

The conveners stressed the importance of continuing to develop the report contents, increase the number of sections in any single chapter to cover the latest on its topic, and add a main relevant issue/theme that changes every year, whenever possible. Also, it has been agreed that the topic of the pivotal chapter for 2018 will be on the "Renewables at the Arab Countries: Reality and Future Prospects."

Petroleum Developments in the World Market and Member Countries*

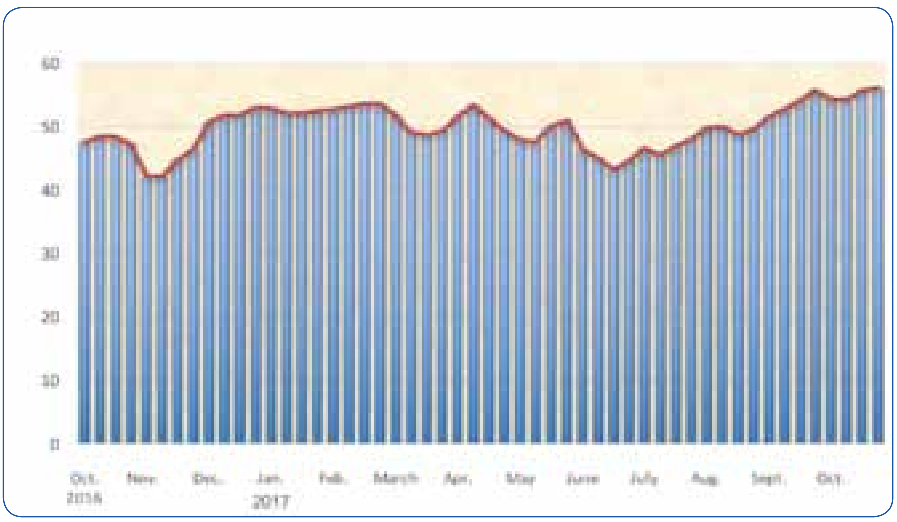
1. Oil Market

1. Prices

1-1Crude Oil Prices

Weekly average price of OPEC basket decreased during the first week of October 2017, to reach $54.4/bbl, and raise thereafter, to reach its highest level of $56.3/bbl during the fourth week, as shown in **figure 1**:

Figure - 1 Weekly Average Spot Price of the OPEC Basket of Crudes 2016 - 2017 ($/bbl)



On monthly basis, OPEC Reference Basket in October 2017, averaged $55.5/bbl, representing an increase of $2.1/bbl or 3.9% comparing with previous month, and an increase of $7.6/bbl or 15.9% from the same month of previous year. OPEC and non-OPEC countries continued to conform with voluntary output adjustments, strong demand, and US stocks decline, were major stimulus for the increase in oil prices during the month of October 2017.

Key Indicators

- *In October 2017, **OPEC Reference Basket increased** by 3.9% or $2.1/bbl from the previous month level to stand at $55.5/bbl.*
- ***World oil demand** in 3Q2017, **increased** by 1.5% or 1.4 million b/d from 2Q2017 level to reach97.7 million b/d.*
- ***World oil supplies** in 3Q2017, **increased** by 0.6% or 0.6 million b/d from 2Q2017 level to reach96.5 million b/d.*
- ***US tight oil production** in October 2017, **increased** by 1.7% to reach about 6 million b/d, whereas **US oil rig count decreased** by 13 rig from the previous month level to stand at 797 rig.*
- ***US crude oil imports** in September 2017, **decreased** by 12.6% from the previous month level to reach 7.1 million b/d, whereas **US product imports increased*** by *3% to reach about 2.4 million b/d.*
- ***OECD commercial inventories** in September 2017 **decreased** by* 41 *million barrels from the previous month level to reach 2969 million barrels*, and **Strategic inventories** in OECD-34, South Africa and China ***decreased** by* 5 *million barrels from the previous month level to reach 1858 million barrels*,
- ***The average spot price of natural gas** at the Henry Hub in October 2017 **decreased** by $0.10/million BTU comparing with the previous month level to reach $2.88/million BTU.*
- ***The Price of Japanese LNG imports** in September 2017 **decreased** by $0.27/m BTU to reach $8.1/m BTU, the **Price of Chinese LNG imports decreased** by $0.28/m BTU to reach $7.2/m BTU, and **the Price of Korean LNG imports decreased** by $0.1/m BTU to reach $8.1/m BTU.*
- ***Arab LNG exports to Japan, Korea and China** were about 2.700 million tons in September 2017 (a share of 23.2% of total imports).*

* Prepared by the Economics Department.

Table (1) and **figure (2)** show the change in the price of the OPEC basket versus last month and the corresponding month of last year:

Table 1 **Change in Price of the OPEC Basket of Crudes, 2016-2017** ($/bbl)

	Oct. 2016	Nov.	Dec.	Jan. 2017	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.
OPEC Basket Price	47.9	43.2	51.7	52.4	53.4	50.3	51.4	49.2	45.2	46.9	49.6	53.4	55.5
Change From previous Month	5.0	-4.7	8.5	0.7	1.0	-3.1	1.1	-2.2	-4.0	1.7	2.7	3.8	2.1
Change from same month of previous Year	2.8	2.7	18.1	25.9	24.7	15.7	13.5	6.0	-0.6	4.2	6.5	10.5	7.6

* Effective June 16,2005 OPEC replaced its seven-crude basket with one comprised of eleven crudes, one from each member country (weighted according to production and exports to major markets). Effective 1 January and mid of October 2007, Angola's Girassol and Ecuadorian Oriente crudes have been incorporated to become the 12th and 13th crudes comprising the new OPEC Basket. As of Jan.2009, the basket excludes the Indonesian crude. As of Jan. 2016, the basket price includes the Indonesian crude. As of July 2016, the basket price includes the Gabonese crude. As of Jan. 2017, the basket excludes the Indonesian crude. As of June 2017 the basket price includes the Equatorial Guinean crude "Zafiro".

Figure - 2 **Change in the Price of the OPEC Basket of Crudes, 2016-2017** ($/bbl)

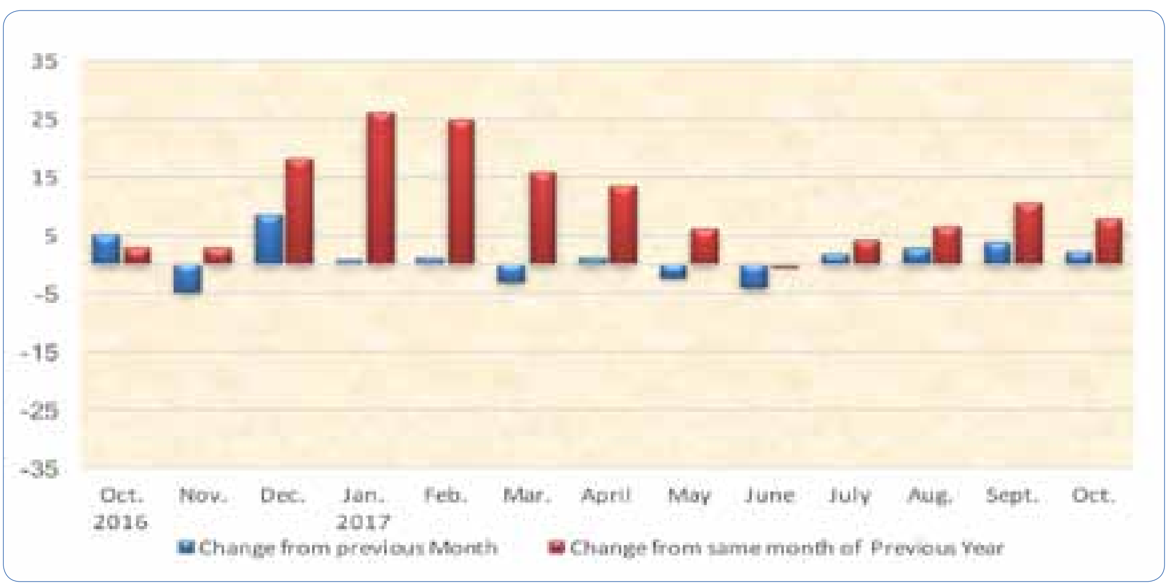


Table (3) in the annex show spot prices for OPEC basket and other crudes for the period 2015-2017.

1-2 Spot Prices of Petroleum Products

- **US Gulf**

  In October 2017, the spot prices of premium gasoline decreased by 11% or $9.3/bbl comparing with their previous month levels to reach $75.2/bbl, spot prices of gas oil decreased by 0.5% or $0.3/bbl to reach $66.1/bbl, whereas spot prices of fuel oil increased by 1.6% or $0.8/bbl to reach $49.4/bbl.

- Rotterdam

The spot prices of premium gasoline decreased in October 2017, by 4.4% or $3.5/bbl comparing with previous month levels to reach $76.1/bbl, whereas spot prices of gas oil increased by 0.6% or $0.4/bbl to reach $71.7/bbl, and spot prices of fuel oil increased by 1.6% or $0.8/bbl to reach $50.6/bbl.

- Mediterranean

The spot prices of premium gasoline decreased in October 2017, by 4.1% or $2.9/bbl comparing with previous month levels to reach $67.4/bbl, whereas spot prices of gas oil increased by 0.4% or $0.3/bbl to reach $71/bbl, and spot prices of fuel oil increased by 3% or $1.5/bbl to reach $51.5 bbl.

- Singapore

The spot prices of premium gasoline decreased in October 2017, by 0.6% or $0.4/bbl comparing with previous month levels to reach $70/bbl, whereas spot prices of gas oil increased by 1% or $0.7/bbl to reach $70/bbl, and spot prices of fuel oil increased by 2.4% or $1.2/bbl to reach $51.9/bbl.

Figure (3) shows the price of Premium gasoline in all four markets from October 2016 to October 2017.

Figure - 3 **Monthly Average Spot Prices of Premium Gasoline, 2016-2017** ($/bbl)

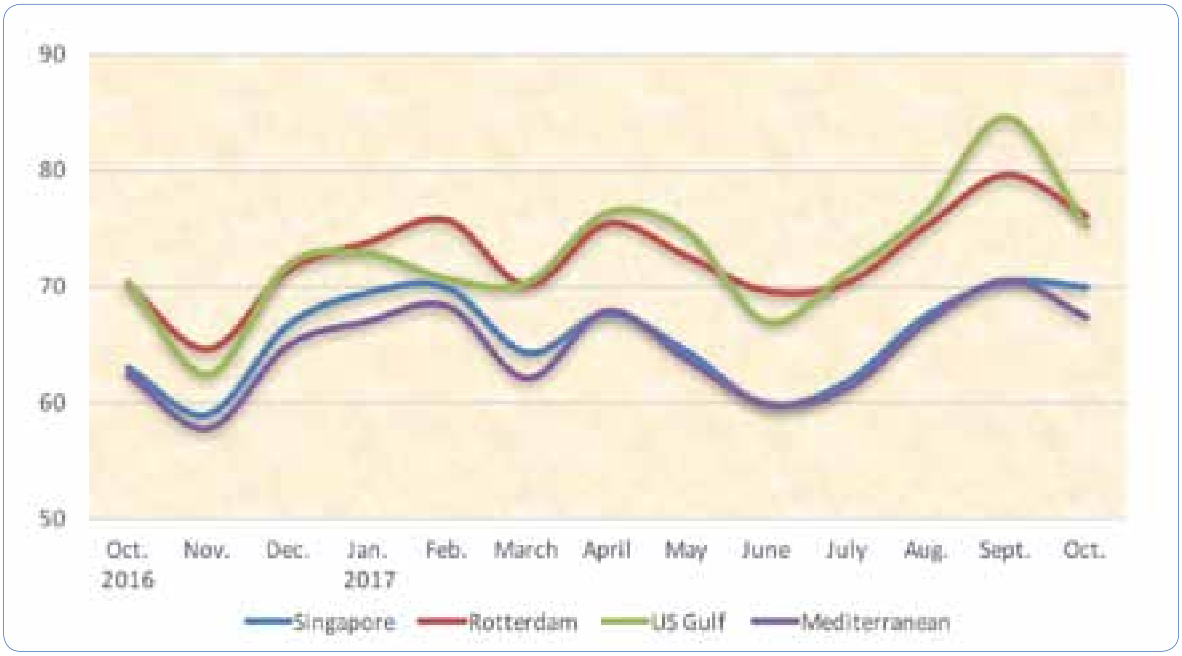


Table (4) in the annex shows the average monthly spot prices of petroleum products, 2015-2017.

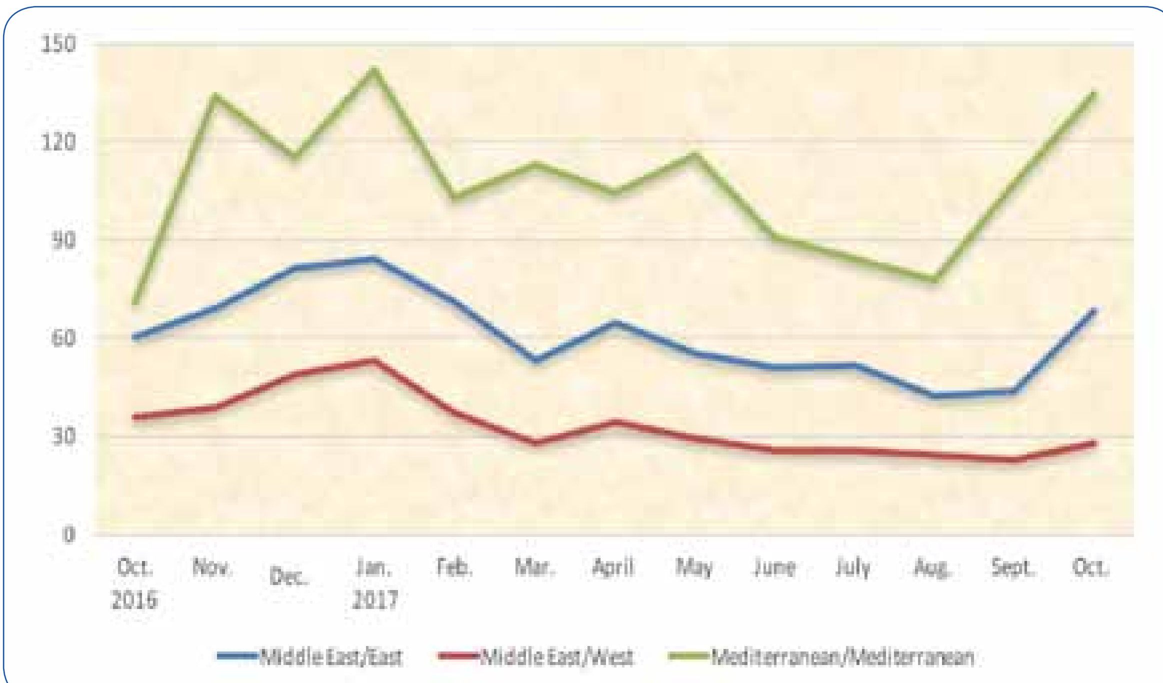
1-3 Spot Tanker Crude Freight Rates

In October 2017, Freight rates for crude oil for tanker size (230-280 thousand deadweight tons (dwt)), leaving Middle Eastern ports to the East, increased by 24 points or 54.5% comparing with previous month to reach 68 points on the World Scale (WS*), freight rates for crude oil for tanker size (270-285 thousand deadweight tons (dwt)), leaving Middle Eastern ports to the West, increased by 5 points or 21.7% comparing with previous month to reach 28 points on the World Scale (WS).

And freight rates for inter - Mediterranean for small to medium sized tankers (80-85 thousand deadweight tons (dwt)), increased by 28 points or 26.2% comparing with previous month to reach 135 points on the World Scale (WS).

Figure (4) shows the freight rates for crude oil to all three destinations from October 2016 to October 2017.

Figure - 4 **Monthly Spot Crude Oil Tanker Freight Rates, 2016 -2017** (World Scale)*



* World Scale is a method for calculating freight prices. One point for the WS means 1% of the standard price of freight in the direction in the WS book, which is published annually by the World Scale Association. The book contains a list of prices in the form of US dollar per ton, called "World Scale 100," for all the major routes in the world.

1-4 Spot Tanker Product Freight Rates

In October 2017, monthly spot Tanker freight rates for petroleum products [for tanker size 30-35 thousand deadweight tons (dwt)], leaving Middle Eastern ports to the East, decreased by 15 points, or 10.8% comparing with previous month to reach 124 points on WS.

Freight rates for Petroleum Products across Mediterranean [for tanker size 30-35 thousand deadweight tons (dwt)], decreased by 7 points, or 4.2% to reach 158 points on WS, and freight rates for petroleum products [for tanker size 30-35 thousand deadweight tons (dwt)], leaving Mediterranean to North-West Europe decreased by 5 points, or 2.9% to reach 169 points on WS.

Figure (5) shows the freight rates for oil products to all three destinations from October 2016 to October 2017.

Figure - 5 **Monthly Spot Product Tanker Freight Rates, 2016 -2017** (World Scale)

Table (5) and **(6)** in the annex show crude and products Tankers Freight Rates, 2015-2107.

2.Supply and Demand

Preliminary estimates in 3Q2017 show an ***increase*** in **world oil demand** by 1.5% or 1.4 million b/d, comparing with 2Q2017 level to reach 97.7 million b/d, representing an increase of 1.7 million b/d from their last year level.

Demand in **OECD** countries ***increased*** by 1.7% or 0.8 million b/d comparing with 2Q2017 level to reach 47.7 million b/d, representing an increase of 0.4 million b/d from their last year level. And demand in **Non-OECD** countries ***increased*** by 1.2% or 0.6 million b/d comparing with 2Q2017 level to reach 50 million b/d, representing an increase of 1.3 million b/d from their last year level.

On the supply side, preliminary estimates show that ***world oil supplies*** for 3Q2017 ***increased*** by 0.6% or 0.6 million b/d, comparing with 2Q2017 level to reach 96.5 million b/d, representing an increase of 0.9 million b/d from their last year level.

In 3Q2017, **OPEC** crude oil and NGLs/condensates total supplies ***increased*** by 1.3% or 0.5 million b/d, comparing with 2Q2017 level to reach 39.1 million b/d, representing an increase of 0.3 million b/d from their last year level. Preliminary estimates show that **Non-OPEC** supplies ***increased*** by 0.2% or 0.1 million b/d, comparing with 2Q2017 level to reach 57.4 million b/d, representing an increase of 0.6 million b/d from their last year level.

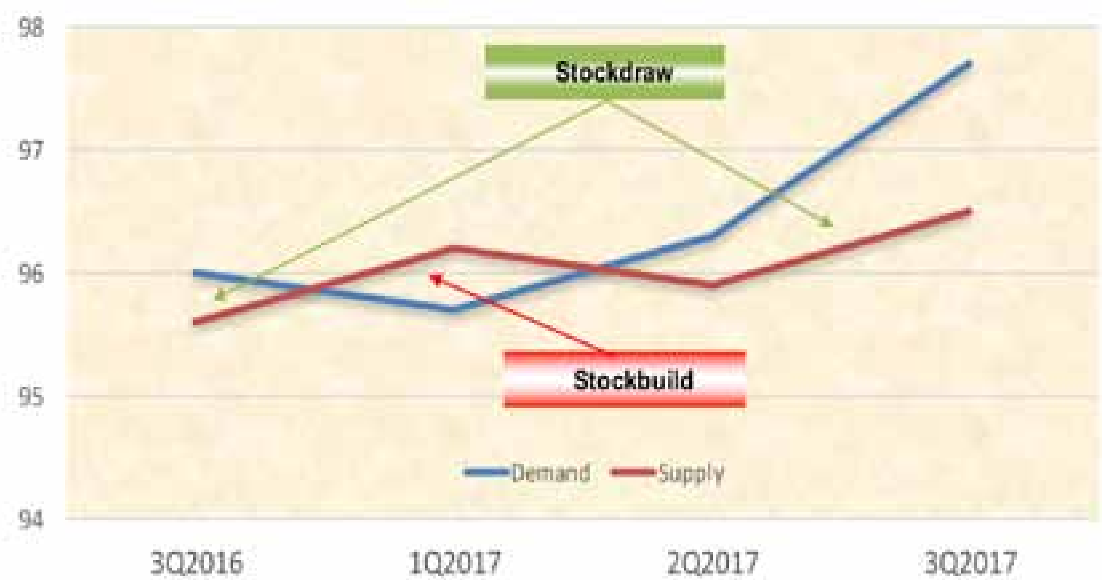
Preliminary estimates of the supply and demand for 3Q2017 reveal a shortage of 1.2 million b/d, compared to a shortage of 0.4 million b/d in 2Q2017 and 3Q2016, as shown in **table (2)** and **figure (6)**:

Table 2 **World Supply and Demand** (Million b/d)

	3Q2017	2Q2017	Change from 2Q2017	3Q2016	Change from 3Q2016
OECD Demand	47.7	46.9	0.8	47.3	0.4
Rest of the World	50.0	49.4	0.6	48.7	1.3
World Demand	**97.7**	**96.3**	**1.4**	**96.0**	**1.7**
OPEC Supply :	39.1	38.6	0.5	38.8	0.3
Crude Oil	32.7	32.3	0.4	32.6	0.1
NGLs & Cond.	6.4	6.3	0.1	6.2	0.2
Non-OPEC Supply	55.2	55.1	0.1	54.6	0.6
Processing Gain	2.2	2.2	0.0	2.2	0.0
World Supply	**96.5**	**95.9**	**0.6**	**95.6**	**0.9**
Balance	**(1.2)**	**(0.4)**		**(0.4)**	

Source: OPEC Monthly Oil Market Report, November 2017.

Figure - 6 World Supply and Demand (Million b/d)



Tables (7) and **(8)** in the annex show **world oil demand and supply** for the period 2015-2017.

US tight oil production

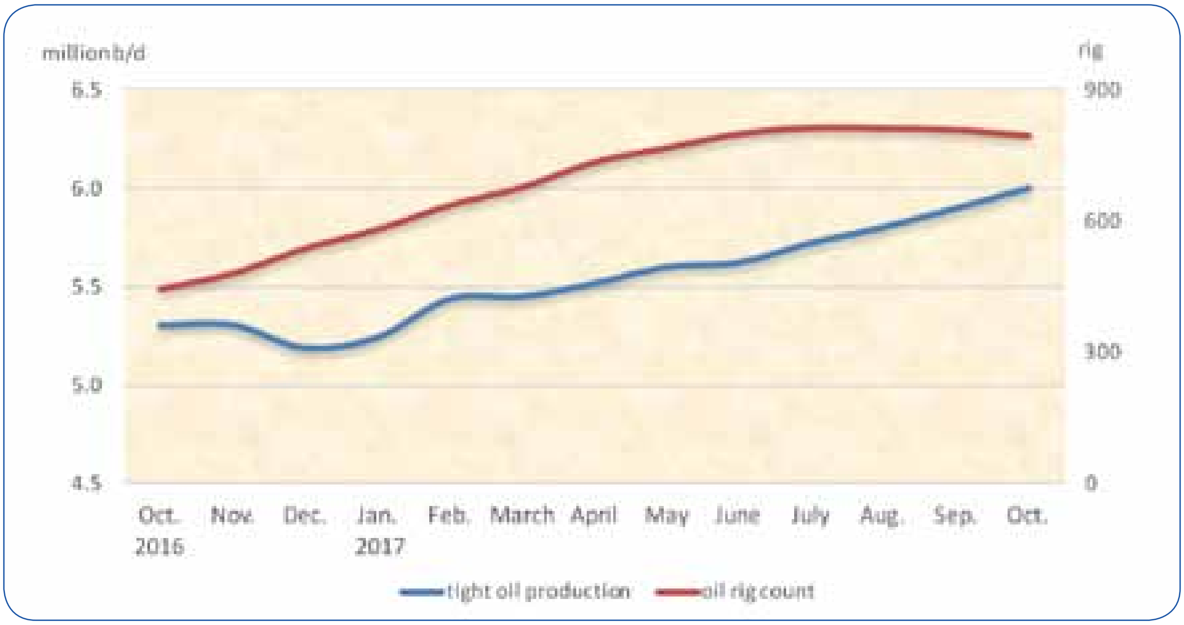
In October 2017, US tight oil production increased by 102 thousand b/d or 1.7% comparing with the previous month level to reach 6.002 million b/d, representing an increase of 697 thousand b/d from their last year level. The US oil rig count decreased by 13 rig comparing with the previous month level to reach 797 rig, a level that is 352 rig higher than last year, as shown in **table (3)** and **figure (7)**:

Table 3 US* tight oil production (Million b/d)

	October 2017	September 2017	Change from September 2017	October 2016	Change from October 2016
tight oil production	6.002	5.900	0.102	5.305	0.697
Oil rig count (rig)	797	810	(13)	445	352

Source: EIA, Drilling Productivity Report for key tight oil and shale gas regions, December 2017.
* focusing on the six most prolific areas, which are located in the Lower 48 states. These six regions accounted for 92% of domestic oil production growth during 2011-2014, Bakken, Eagle Ford, Haynesville, Niobrara, Permian, Appalachia (Utica and Marcellus), in addition to Anadarko region which become the target of many producers in the recent years, as of July 2017, there are 129 operating rigs in the Anadarko region.

Figure - 7 US tight oil production and oil rig count



3.Oil Trade

USA

In September 2017, US crude oil imports decreased by 1 million b/d or 12.6% comparing with the previous month level to reach 7.1 million b/d. Whereas US oil products imports increased by 68 thousand b/d or 3% to reach about 2.4 million b/d.

On the export side, US crude oil exports increased by 439 thousand b/d or 51.3% comparing with the previous month level to reach 1.3 million b/d, whereas US products exports decreased by 192 thousand b/d or 4.3% to reach 4.3 million b/d. As a result, US net oil imports in September 2017 were 1.2 million b/d or nearly 23.4% lower than the previous month, averaging 3.9 million b/d.

Canada remained the main supplier of crude oil to the US with 44% of total US crude oil imports during the month, followed by Saudi Arabia with 12%, then Venezuela with 7%. OPEC Member Countries supplied 37% of total US crude oil imports.

Japan

In September 2017, Japan's crude oil imports decreased by 34 thousand b/d or 1% comparing with the previous month to reach 3.1 million b/d. And Japan oil products imports decreased by 145 thousand b/d or 24.7% comparing with the previous month to reach 443 thousand b/d.

On the export side, Japan's oil products exports increased in September 2017, by 25 thousand b/d or 3.7% comparing with the previous month, averaging 696 thousand b/d. As a result, Japan's net oil imports in September 2017 decreased by 204 thousand b/d or 7% to reach 2.9 million b/d.

Saudi Arabia was the big supplier of crude oil to Japan with a share of 37% of total Japan crude oil imports, followed by UAE with 27% and Kuwait with 9% of total Japan crude oil imports.

China

In September 2017, China's crude oil imports increased by 1 million b/d or 12.5% to reach 9 million b/d, and China's oil products imports increased by 91 thousand b/d or 7% to reach 1.4 million b/d.

On the export side, China's crude oil exports reached 109 thousand b/d. And China's oil products exports decreased by 169 thousand b/d or 14% to reach 1 million b/d. As a result, China's net oil imports reached 9.3 million b/d, representing an increase of 15% comparing with the previous month level.

Russia was the big supplier of crude oil to China with 17% of total China's crude oil imports during the month, followed by Angola with 13%, and Saudi Arabia with 12%.

Table (4) shows changes in crude and oil products net imports/(exports) in September 2017 versus the previous month:

Table 4 USA, Japan and China Crude and Product Net Imports / Exports (Million bbl/d)

	Crude Oil			oil Products		
	September 2017	August 2017	Change from August 2017	September 2017	August 2017	Change from August 2017
USA	5.828	7.290	-1.462	-1.900	-2.161	0.261
Japan	3.170	3.204	-0.034	-0.253	-0.083	-0.170
China	8.922	7.962	0.960	0.378	0.118	0.260

Source: OPEC Monthly Oil Market Report, various issues 2017.

4. Oil Inventories

In September 2017, **OECD commercial oil inventories** decreased by 41 million barrels to reach 2969 million barrels – a level that is 98 million barrels lower than a year ago. It is worth mentioning that during the month, **commercial crude inventories in OECD** increased by 6 million barrels to reach 1166 million barrels, whereas **commercial oil products inventories** decreased by 47 million barrels to reach 1803 million barrels.

Commercial oil inventories in Americas decreased by 17 million barrels to reach 1560 million barrels, of which 621 million barrels of crude and 939 million barrels of oil products. **Commercial oil Inventories in Europe** decreased by

19 million barrels to reach 972 million barrels, of which 343 million barrels of crude and 629 million barrels of oil products. And **commercial oil inventories in Pacific** decreased by 5 million barrels to reach 437 million barrels, of which 202 million barrels of crude and 235 million barrels of oil products.

In the rest of the world, commercial oil inventories decreased by 1 million barrels to reach 2779 million barrels, whereas the **Inventories at sea** increased by 4 million barrels to reach 1144 million barrels.

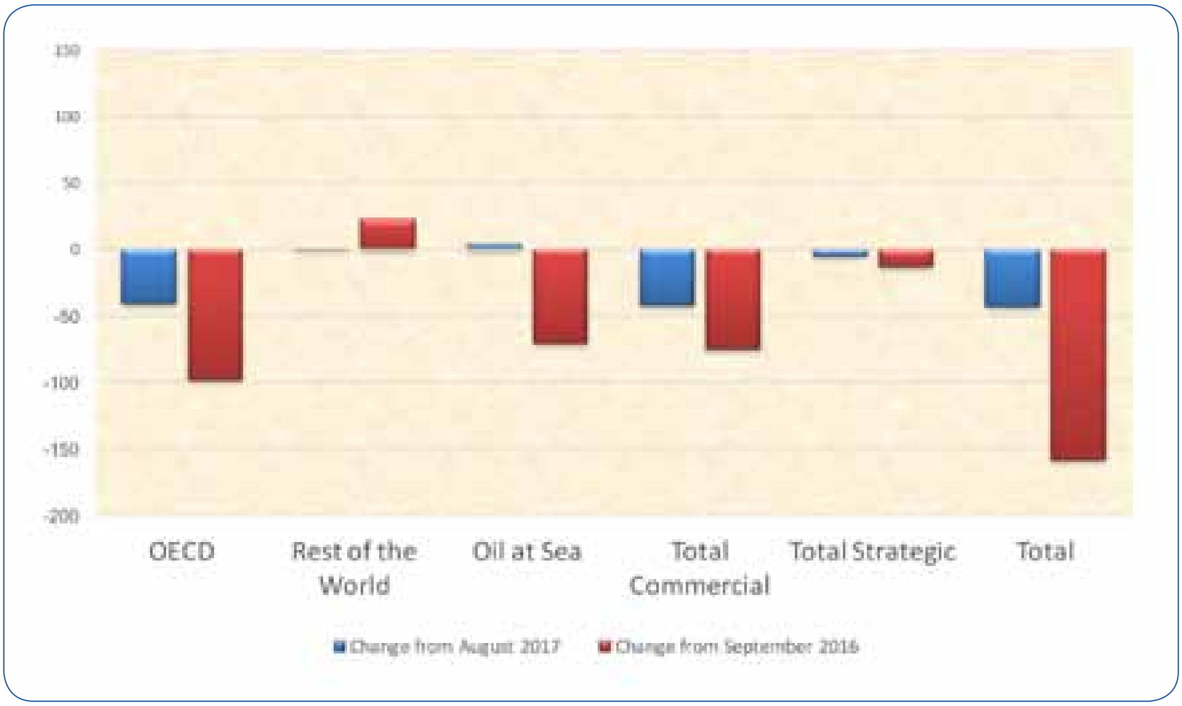
As a result, **Total Commercial oil inventories** in September 2017 decreased by 42 million barrels to reach 5748 million barrels – a level that is 75 million barrels lower than a year ago.

Strategic inventories in OECD-34, South Africa and China decreased by 5 million barrels to reach 1858 million barrels – a level that is 13 million barrels lower than a year ago

Total world inventories, at the end of September 2017 were at 8750 million barrels, representing a decrease of 43 million barrels comparing with the previous month, and a decrease of 159 million barrels comparing with the same month a year ago.

Table (9) in the annex and **figure (8)** show the changes in global inventories prevailing at the end of September 2017.

Figure - 8 **Changes in Global Inventories at the End of September 2017** (Million bbl)



II. The Natural Gas Market

1- Spot and Future Prices of Natural Gas in US market

The monthly average of spot natural gas price at the Henry Hub in October 2017 decreased by $0.10/million BTU comparing with the previous month level to reach $2.88/million BTU.

The comparison, shown in **table (5)**, between natural gas prices and the WTI crude reveal differential of $6/ million BTU in favor of WTI crude.

Table 5 Henry Hub Natural Gas and WTI Crude Average Spot Prices, 2016-2017 ($/ Million BTU[1])

	Oct. 2016	Nov.	Dec.	Jan. 2017	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.
Natural Gas [(2)]	3.0	2.6	3.6	3.3	2.8	2.9	3.1	3.2	3.0	3.0	2.9	3.0	2.9
WTI Crude [(3)]	8.6	7.9	9.0	9.1	9.2	8.6	8.8	8.4	7.8	8.1	8.3	8.3	8.9

1. British Thermal Unit.
2. Henry Hub spot price.
3. WTI – West Texas Intermediate Crude oil price, in dollars per barrel, is converted to dollar per million BTU using a conversion factor of 5.80 million BTU/bbl.

Source: http://www.eia.gov/dnav/ng/hist/rngwhhdM.htm

2- LNG Markets in North East Asia

The following paragraphs review the developments in LNG Markets in North East Asia, concerning prices and Japanese, Chinese and South Korean imports of LNG and their sources, and Spot LNG Exporters Netbacks.

2.1. LNG Prices

In September 2017, the price of Japanese LNG imports decreased by $0.27/ million BTU comparing with the previous month to reach $8.1 million BTU, the price of Chinese LNG imports decreased by $0.28/million BTU comparing with the previous month to reach $7.2/ million BTU, and the price of Korean LNG imports decreased by $0.1/million BTU comparing with the previous month to reach $8.1/ million.

2.2. LNG Imports

Total Japanese, Korean and Chinese LNG imports from various sources, decreased by 10.5% or 1.359 million tons from the previous month level to reach 11.643 million tons.

Table (6) shows the prices and quantities of LNG imported by Japan, South Korea, and China for the period 2015-2017.

Table6 LNG Prices and Imports: Korea, Japan, and China 2015-2017

	Imports (thousand tons)				Average Import Price ($/million BTU)		
	Japan	Korea	China	Total	Japan	Korea	China
2015	**84850**	**33141**	**19606**	**137597**	**10.2**	**10.6**	**8.6**
2016	**82767**	**33257**	**26017**	**142041**	**6.9**	**6.9**	**6.5**
January 2016	7245	3338	2464	13047	7.9	8.0	7.3
February	7370	2998	1801	12169	8.0	7.8	6.9
March	7959	3282	1702	12943	7.2	7.3	6.6
April	6382	2177	1861	10420	6.4	6.6	6.6
May	5455	2218	1425	9098	5.9	6.0	6.3
June	6193	2484	2146	10823	6.0	5.7	6.0
July	6460	1918	1604	9982	6.3	5.9	5.4
August	7656	1971	2257	11884	6.7	6.3	6.0
September	6671	2236	2527	11434	7.1	6.8	6.1
October	6282	3187	1838	11307	7.2	7.3	6.7
November	7545	3422	2659	13626	7.1	7.5	6.8
December	7549	4026	3733	15308	7.1	7.3	7.1
January 2017	8302	4294	3436	16032	7.5	7.9	7.0
February	7790	3600	2372	13762	7.9	8.0	7.0
March	8143	3527	1991	13661	7.7	7.8	6.9
April	6573	2337	2171	11081	8.2	7.8	7.0
May	6239	2488	2911	11638	8.5	8.3	7.3
June	6185	3460	3038	12683	8.3	7.8	7.1
July	6817	2716	3121	12654	8.3	7.9	7.4
August	7259	2603	3140	13002	8.3	8.2	7.4
September	5821	2368	3454	11643	8.1	8.1	7.2

Source: World Gas Intelligence various issues.

2.3. Sources of LNG imports

Australia was the big supplier of LNG to Japan, Korea and China with 4.308 million tons or 37% of total Japan, Korea and China LNG imports in September 2017, followed by Qatar with 17% and Malaysia with 13%.

The Arab countries LNG exports to Japan, Korea and China totaled 2.700 million tons - a share 23.2% of total Japanese, Korean and Chinese LNG Imports during the same month.

2.4. LNG Exporter Netbacks

With respect to the Netbacks at North East Asia markets, Russia ranked first with $7.31/million BTU at the end of September 2017, followed by Indonesia with $7.20/million BTU then Malaysia with $7.15/million BTU, and Australia with $7.14/million BTU. LNG Qatar's netback reached $6.95/million BTU, and LNG Algeria's netback reached $6.59/million BTU.

Table (7) shows LNG exporter main countries to Japan, South Korea, and China and their netbacks at the end of September 2017.

Table7 LNG Exporter Main Countries To Japan, Korea and China, And Their Netbacks At The End Of September 2017

	Imports (thousand tons)				Spot LNG Netbacks at North East Asia Markets ($/million BTU)
	Japan	Korea	China	Total	
Total Imports, of which:	**5821**	**2368**	**3454**	**11643**	
Australia	1800	671	1837	**4308**	**7.14**
Qatar	657	630	687	**1974**	**6.95**
Malaysia	955	172	392	**1519**	**7.15**
Indonesia	690	141	253	**1084**	**7.20**
Russia	392	25	–	**647**	**7.31**

* Export Revenues minus transportation costs, and royalty fees.
Source: World Gas Intelligence various issues.

Tables Annex

ANNOUNCEMENT

OAPEC AWARD FOR SCIENTIFIC RESEARCH FOR THE YEAR 2018

Pursuant to its policy of encouraging scientific research by awarding two prizes on a biennial basis (First Prize KD 7000, Second Prize KD 5000, equivalent to USD $23000 and USD $16000), upon the resolution number 1/147 of OAPEC Executive Bureau at its meeting dated 14/5/2017. The Organization of Arab Petroleum Exporting Countries (OAPEC) is pleased to announce that the research field selected for the "OAPEC Award for Scientific Research for the Year 2018" is:

"Petroleum and Energy- Related Economic Research Including Supply, Consumption and Prices"

Research field:

The economic dimension represents a major component of energy industry, in general, and oil and gas in particular. Economic research addressing petroleum and energy industry covers a broad spectrum of expanses, including supply, demand, trade movements, prices trend, petroleum revenues, investment, and the various energy policies. Correlation between energy and sustainable development goals, as well as numerous other aspects, are also targeted by the research. A whole host of addressable thrusts are tackled in the different parts of the research. The economic aspect, pertinent to one of the proposed petroleum and energy, should tackled by the researcher. These domains include:

1. **Current and Future Developments in Energy Markets.**
2. **Global Supply of Various Energy Sources.**
3. **Global Energy Demand: Current and Future Prospects.**
4. **Developments in Energy Prices and Their Implications for Demand and Supply Levels.**
5. **Energy Subsidy Policies and Their Impacts on Domestic Economies.**
6. **Petroleum Revenues and Their Impact on Producing Countries' Economies.**
7. **Investment in Energy, Enhancing The Role of The Private Sector: Current Status and Future Prospects.**
8. **The Energy Policies in The Main Consuming Countries and Their Implications for The Energy Future.**

Conditions for Submitting the Research

1. **The research may be submitted by one or more author(s). Institutions and organizations are excluded.**
2. **The research submitted must be new and original, and has not been granted an award previously.**
3. **The author(s) shall agree in advance to give OAPEC the right to print and publish the research in case his/her/their win one of the prizes. A signed statement to this effect must be submitted with the research (sample provided below). The author(s) will maintain all other rights, including patent rights (if applicable). OAPEC shall not exercise its right to publish the winning research for a period of six months commencing with the date of advising the winning author (s) with the decision of the Award Committee.**
4. **A statement by the author(s), attesting that the research is original. Segments fully or partially adopted from other sources should be properly cited. A detailed list of all references used must also be attached.**

5. **Four hard copies and a digital copy of the research (either in Arabic or English) should be submitted, along with the Curriculum Vitae of each researcher, to the Organization of Arab Petroleum Exporting Countries.**
6. **The deadline for submitting the research is 31st May, 2018. No submission will be accepted after that date.**
7. **Prizes are awarded to individuals of all nationalities advised of the Award Committee's decision.**
8. **The award will not be presented twice consecutively to the same recipient.**
9. **Any research that does not fulfill the above conditions shall be disregarded.**

Researchers will be notified by OAPEC Secretariat of the Award Committee's decision. The winners will be officially announced at the end of the OAPEC's Ministerial Council in 2018.

For further information you may contact the OAPEC General Secretariat at:

Organization of Arab Petroleum Exporting Countries (OAPEC)
Secretariat of the Award Organizing Committee
P.O.Box 20501 Safat 13066 Kuwait
Tel.: (+965) 24959766 - Fax: (+965) 24959755
E-mail:oapecaward2018@oapecorg.org
Website: www.oapecorg.org

Organization of Arab Petroleum Exporting Countries (OAPEC)
OAPEC AWARD FOR SCIENTIFIC RESEARCH FOR THE YEAR 2018

Field

"Petroleum and Energy-Related Economic Research Including Supply, Consumption and Prices"

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I, undersigned:

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Hereby undertake to relinquish all printing and publications right of the research submitted by me entitled:

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